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Value Chain Management of Rubber: A Study with Special Reference to Rubbermark

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Abstract:
The project on 'Value Chain Management of Rubber: A study with special reference to Kerala State Co-operative Rubber Marketing Federation Ltd. (Rubbermark) aims to identify and map the value chain of Rubber, analyse the role of Rubbermark in the chain, point out the constraints faced by the different actors and suggest possible solutions. The study includes Rubbermark, Alwaye Kunnathunad Co-operative Rubber Marketing Society, rubber farmers, processing units such as Rubek Balloon factory, Intermix factory and Crumb rubber factory. The actors are spread over both Ernakulam and Kottayam Districts. The study was based on primary and secondary data. Primary data was collected through structured interview schedule, questionnaires, checklist and discussions with the actors. The tools used for the study are value chain mapping, growth index and percentage analysis.
The study identified that the cost of production incurred by Rubbermark factories were very high. Over emphasis on Rules, Regulations and Sanctions and high quality specifications decreases the profitability of the Federation. Variability in the price of rubber sheet and scrap makes the product costly. The problems encountered by each actor were analysed and some policy interventions were also recommended. While analysing the role of Rubbermark in the value chain management of rubber, it indirectly provides assistance to the farmers. But the farmers were totally ignorant about these schemes. The Rubbermark has to take more measures to directly support the actors in the industry and make the value chain more effective.

Keywords*: Mapping, Value Chain, Rubber, Rubbermark*

1. Introduction

Rubber is a tall softwood tree indigenous to Brazil.. India is the world's largest producer and the third largest consumer of natural rubber and is also one of the fastest growing economies globally. The Indian Rubber Industry plays a vital role in the Indian national economy as the rubber plantation sector in India produces over 630 hundred thousand tones of natural rubber and there is a projected production of more than one million tons in near future.

China being the fastest growing economy of the world is also the world's largest natural rubber consuming country. USA and India got second and third positions respectively. India's natural rubber production has been increasing steadily over the past decade. The major chunk of India's rubber production is contributed by Kerala

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1.1. Statement of the Problem

Rubber is an important source of Income for good number of Kerala growers. Kerala accounts for 90% out of the total area under rubber cultivation in India. Kottayam, the fourth largest rubber grower in India, produces almost nine percent of the world's rubber.

Rubber Board, Rubbermark (Kerala State Co-operative Rubber Marketing Federation Ltd.) and private traders are the major players of the rubber industry in Kerala. Rubber Board is a statutory body constituted by the Government of India for the overall development of the rubber industry in India. Rubbermark is a professionally managed organization of 38 member societies spread throughout the state of Kerala with active participation of the Rubber Board and the Government of Kerala.

Rubbermark is the only government agency in India which procures Natural Rubber directly from the farmers, process and gives to the Tyre and Shoe companies within India. It is a perennial source of rubber to large scale, medium scale and small scale industries for

their right grade in the required quantity at economic prices. It acts as a moderating force in controlling the price during the lean seasons as well as peak seasons of production.

Rubbermark also gives agricultural inputs, including training and free soil testing to rubber farmers. This organization has a wide network which helps not only the farmers, but caters to the needs of all organization which require natural rubber as its input. By the intervention of Rubbermark the rubber growers were free from the clutches of private traders to a large extent.

The main aim of the study is to analyses the role of Rubbermark in the value chain of rubber. A detailed analysis will help to identify the strategies adopted by Rubbermark in order to protect the interest of the farming community as well as the consuming industries. And also it helps to understand how various actors in the chains are integrated and interlinked.

2. Methodology of the Study

Location of the study is Rubbermark in Ernakulam District and farmers residing in Perumbavoor, Ernakulam District. The primary data collected during the period of May-June, 2014.The study is based on both primary and secondary data**.** Primary data collected using questionnaire, interview schedule and checklist from various players of the value chain system (including farmers (40), primary marketing co-operative society, Rubbermark, processing units (3)).Secondary data collected through published sources(journals, magazines, relevant books and websites). The data analysed by using value chain mapping tool, appropriate financial and statistical tools

3. Value Chain Mapping

The present study was undertaken to understand the value chain management of Rubber under Rubbermark. Here, the mapping of value chain has done through the following steps.

3.1. Mapping the core processes in the value chain

Fig. 1 shows the core processes of the value chain of Rubber, in Kerala State Co-operative Rubber Marketing Federation Ltd. which is input provision, cultivation, farm level processing, procurement, processing and marketing. Input provision include the source of seeds, fertilizers, pesticides, labour, machinery, irrigation and finance which are required for the cultivation of Rubber.

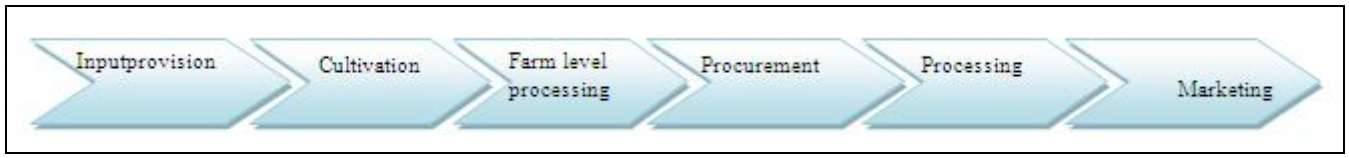

Figure 1: Core processes in the value chain

3.2. Mapping the actors involved in the value chain of Rubber

Fig. 2 shows the actors involved in the value chain of Rubber. Rubbermark provides both organic and inorganic fertilizers and other agricultural inputs to the farmers for the cultivation of rubber. Rubbermark procures rubber sheets and scraps from the farmers through its purchase branches, member societies and from other private dealers. Value addition of the procured rubber takes place at the processing factories of Rubbermark.

The rubber nurseries provide sufficient seedling material to the farmers. The rubber board assists the farmers by providing subsidies for planting, replanting, buying rollers etc. The Alwaye Kunnathunad Co-operative Rubber Marketing Society plays a major role in the marketing of the produce of rubber farmers. It also provides all the inputs such as seedlings, fertilizers, pesticides, rain guarding, shells etc to the member farmers at subsidized rates. The societies procure rubber sheets and scrap rubber from the member farmers and sell it to Rubbermark and other agencies. The processing unit has their own dealers for the marketing of their produce. The dealers help to market their product internationally and locally.

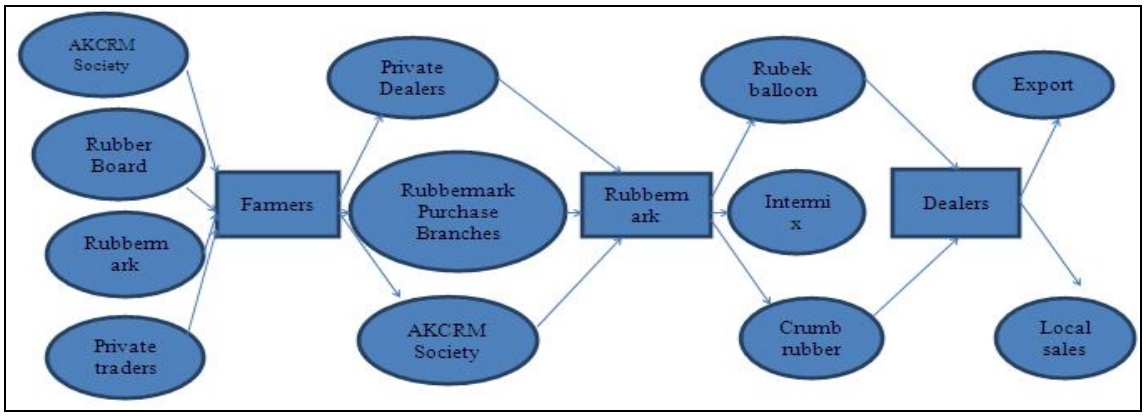

Figure 2: Actors involved in the core processes in the chain

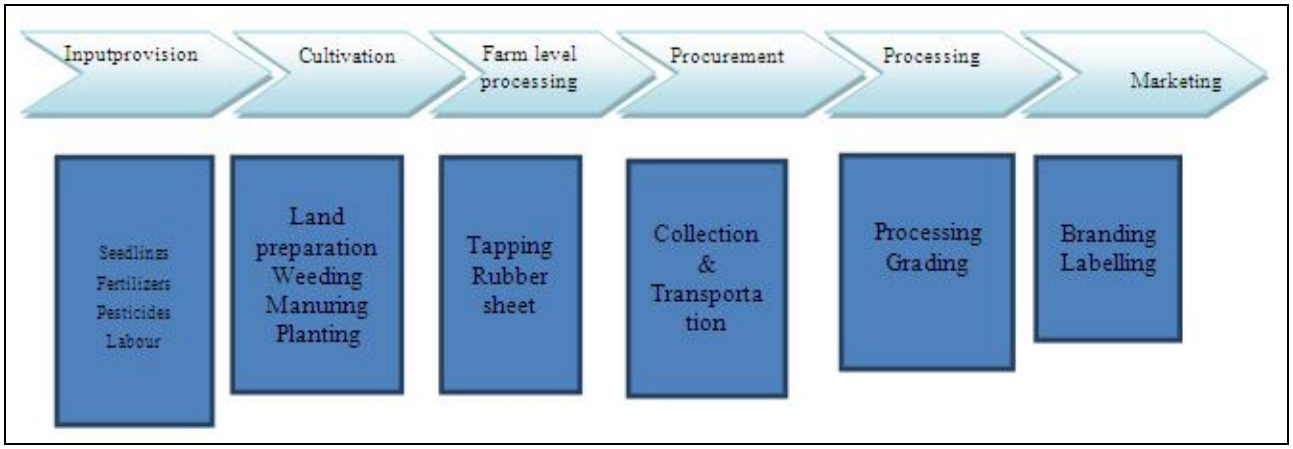

Figure 3: Specific activities undertaken by actors from core processes

3.3. Mapping the specific activities involved in the chain

The specific activities undertaken under each core process is mentioned in the above figure. Buying of seedlings, pesticides, fertilizers, finance for mechanization and use of labour are the main activities involved in input provision. Cultivation includes the growth and care taking of the seedlings. After seven years the trees will be ready for tapping. While cultivation, land has to be prepared, seedlings are planted; weeding, manuring, irrigation and pest control is done.

Field level processing starts with the collection of latex and scrap rubber. The latex will be collected and converted in to rubber sheets. Both sheet and scrap rubber will be dried and stored.

Procurement includes the collection of the produce by the society. The farmers use their own transportation arrangements to deliver the produce. Processing involves the conversion of rubber sheet and scrap rubber in to other forms. The Rubbermark processes scrap rubber in their own factory. Tread rubber, Precured Trearubber, ISNR 20 and Rubek Balloons are the major value added products of Rubber manufactured by these factories. The products are packed, labeled and branded and finally marketed to the consumers who utilize it. Marketing involves selling the produce to various tyre manufacturing companies and exporting to foreign countries.

3.4. Mapping the flow of products

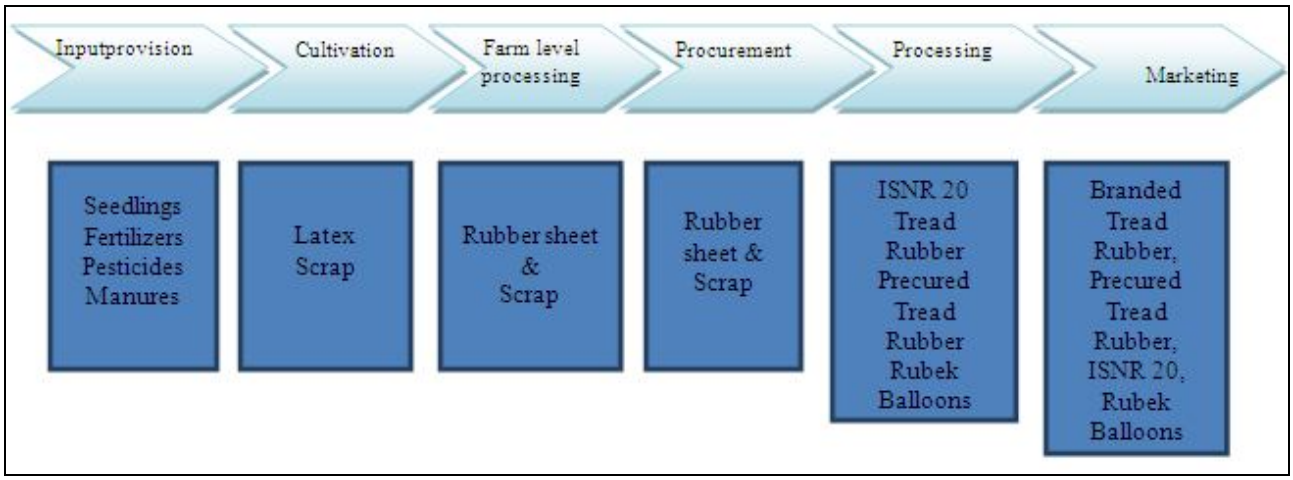

Figure 4

The process of value chain involves flow of products from inputs to branded Tread Rubber, Precured Tread RubbISNR 20 and Rubek Balloons.

3.5. Mapping the knowledge and flow of information in the chain

In this chain, mutual flow of information takes place between all the actors in the chain. Regarding the flow of knowledge, the actors in the chain are unaware of the schemes and activities undertaken by the Rubbermark to develop the Rubber industry.

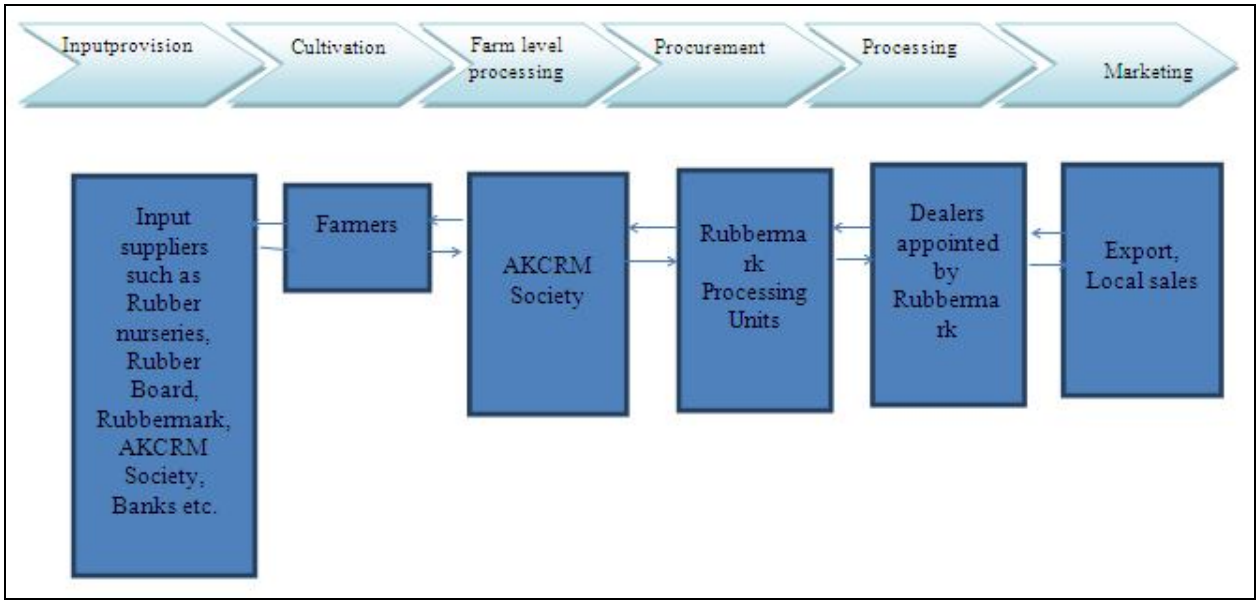

Figure 5: Knowledge and flow of information in the chain

3.6. Mapping the geographical flow of the product

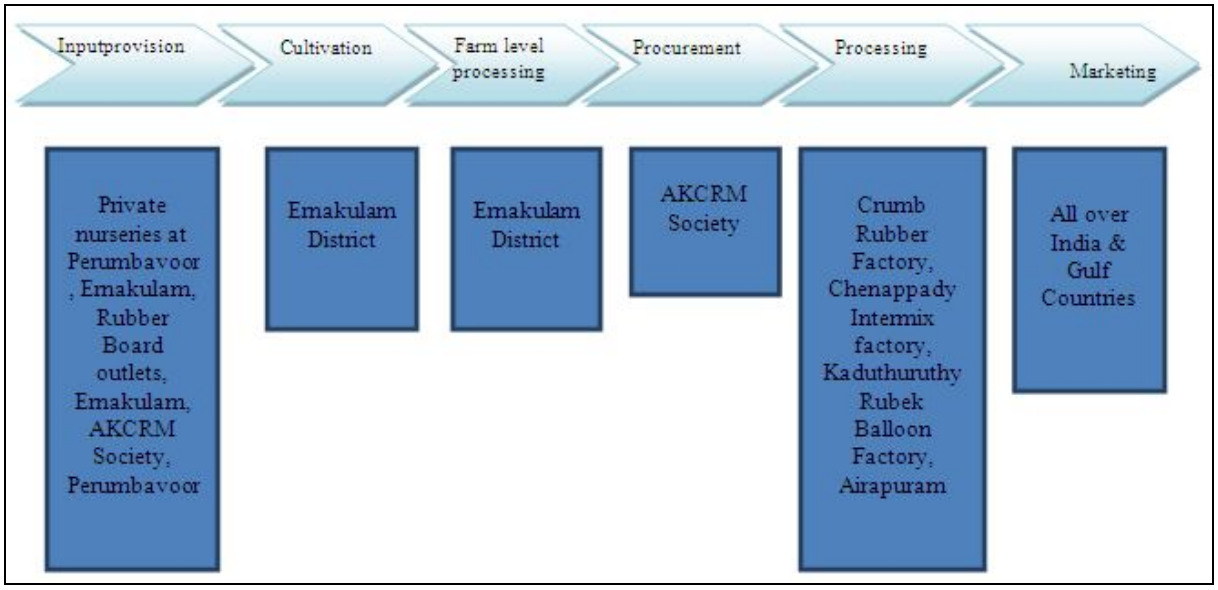

Figure 6: Geographical flow of the product

Fig. 6 shows the geographical flow of the products in the chain. Rubber seedlings are brought from the private nurseries located in Perumbavoor and nearby areas and from Rubber Board regional offices at Ernakulam. Other inputs are obtained from the local resources. Cultivation is done in entire Ernakulam district. Procurement is done in three depots of AKCRM Society situated at Manjapra, Vengoor and Pattimattom. Processing is done at the Crum rubber factory, Chenappady, Intermix factory, Kaduthuruthy and Rubek Balloon factory, Airapuram. Marketing is done to various tyre companies in India .Export to various foreign countries is also there.

3.7. Mapping the relationship and linkages between actors in the value chain

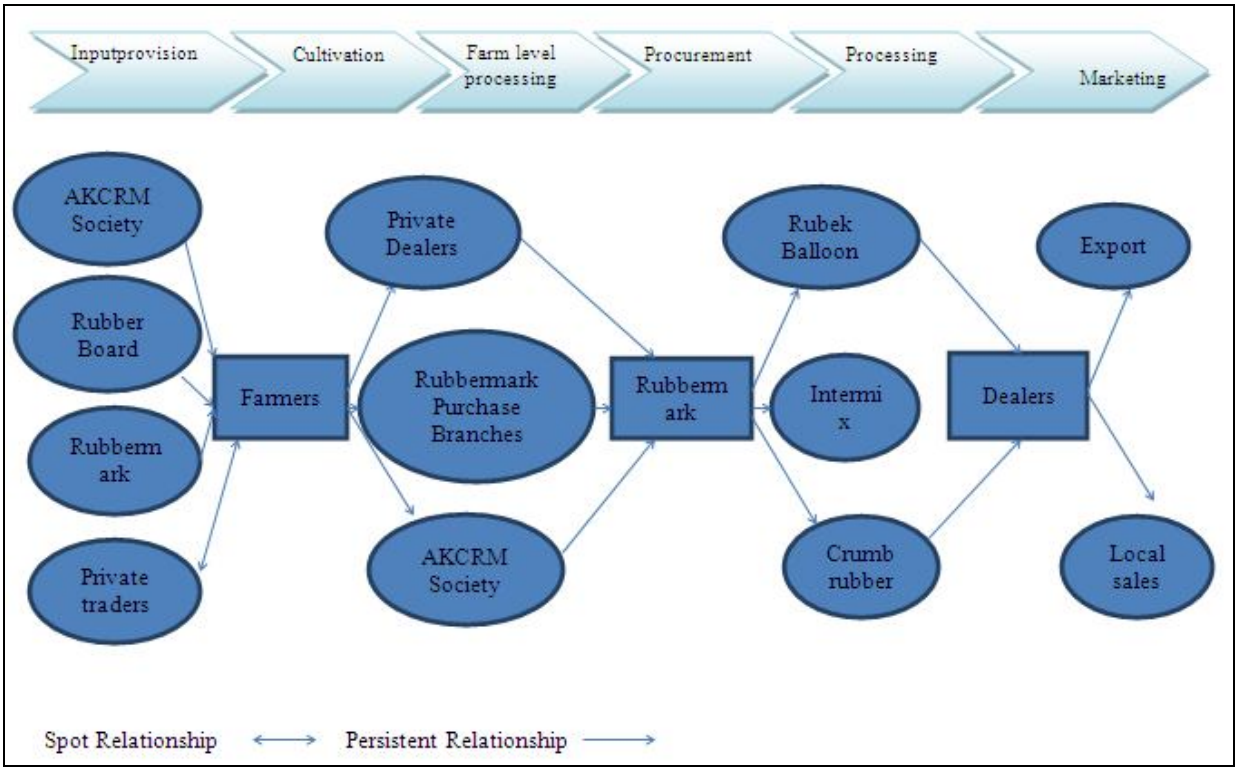

Fig.ure 7: Relationship and linkages between Actors involved in the value chain

Fig 7 shows the relationship and linkages between various actors in the value chain. The sustainability of the value chain of rubber depends largely on the relationships and linkages between the various actors of the value chain. The relationship between private traders and farmers were spot relationship. The relationships between all the other actors in the value chain were persistent.

3.8. Mapping the constraints at each level of the chain

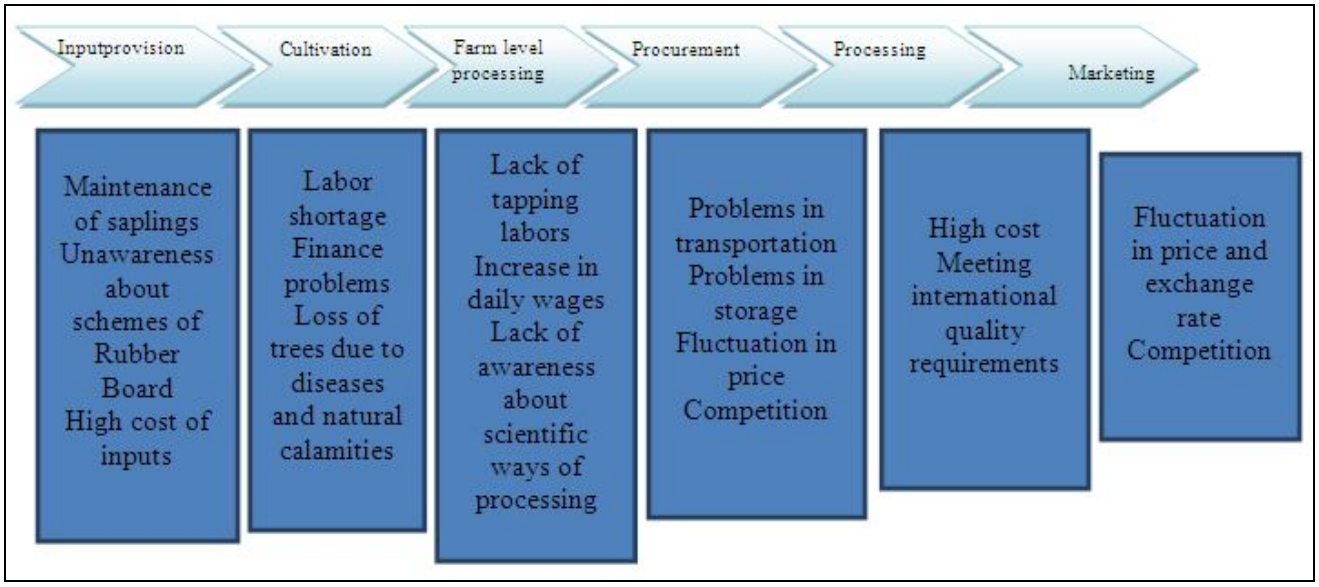

Figure 8

4. Findings

4.1. Production Level

- Small farmers are not able to produce high quality sheet rubbers. Only large farmers with good infrastructural facilities like smoke houses are able to make it.
- The farmers are worried about the fall in price of rubber.
- Majority of the farmers are doing agriculture as their primary occupation.
- Medium and small scale farmers don't have basic infrastructure such as roller machines, smoke houses etc for farm level processing. Most of the respondents are depending on other farmers for such facilities.
- The Alwaye Kunnathunad Co-operative Rubber Marketing society plays an important role for supporting the rubber farmers in the Alwaye Kunnathunad Taluks of Ernakulam District.
- The society procures rubber sheets and scraps from the farmers at reasonable prices and also supplies needed agricultural inputs to the farmers.
- Most of the farmers supply regularly to the society because of the spot payment and ease of transportation.
- The farmers were totally unaware about the role and schemes of Rubber Board and Rubbermark.
- The increase in labour charges and cost of other inputs has resulted in low profitability for farmers.
- Wide fluctuations in the price of rubber sheets affect the farmers badly.

4.2. Procurement and Processing Level

- The society procures rubber from farmers through purchase depots and from rubber dealers.
- There will be shortage in the supply of rubber during rainy seasons.
- The quality of sheet will be poor during rainy season.
- Mode of payment to farmers is by cash / cheque.
- The rubber sheet and scrap rubber procured by the society is supply to Rubbermark and to other dealers.
- Rubbermark purchase rubber sheet and scrap from the societies, purchase branches and from private dealers.
- Rubbermark is fixing price for various grades of rubber considering Rubber Board price, Dealer price, Malayala Manorama price and the price will be informing to the member societies.

4.3. Marketing Level

- Rubbermark exports Rubek Balloons to foreign countries according to the demand.
- Rubbermark has sufficient infrastructure for purchases, store and dispatch rubber and fertilizer.
- Costs of operation of the processing units were higher compared to the competitors.

5. Policy Interventions

The following suggestions can be adopted to make the value chain of Rubber more efficient and profitable to all actors in the chain:

- Ensure that all the services provided by rubber board are reaching at the grass root level. Some farmers are still unaware about the various schemes of rubber board.
- Give training on scientific processing of rubber. This will help to increase the quality.
- Increase the spread of clonal planting material with high productivity. This ensures high production, productivity and disease resistivity of plants.
- Link the farmer with research and extension works. The farmer should be within the reach of all extension works.
- Attract the farmers to sell their produce through co-operative society to avoid exploitation by middle man.
- Help farmers to make own smoke houses to increase the quality as well as to help them dry the produce during rainy season.
- Timely payment to the member societies will help the Federation to make bulk purchases.

6. Conclusion

Indian rubber industry is unique in the sense it is a major producer and consumer of natural rubber. Though rubber products manufacture started in the country in the year 1920, rapid growth in the last four decades has transformed the rubber products manufacturing industry one of the important sectors of the Indian economy. Considering the large population and the large manufacturing base particularly in the automobile industry and the availability of competitive labour, the country offers great opportunities for rubber product manufacture. With further investments in R&D and infrastructure, the country is poised to become a leader in rubber products manufacture in the years ahead.

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